

### STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH



BUREAU OF WATER PROTECTION AND LAND REUSE OFFICE OF THE BUREAU CHIEF

FEB 0 4 2010

February 2, 2010

Paul E. Stacey, Director
Bureau of Water Protection and Land Reuse
Planning & Standards Division
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106

Re: Revised Margin of Safety Data Set for CT's Largest Public Water Supplies

Dear Mr. Stacey:

Please find enclosed a complete new set of available margin of safety data for CT's largest public water suppliers. This revised data set can simply replace the original package of MOS data sheets submitted at the public hearing on January 21, 2010. The new data set is more complete, presented in alphabetical order by public water system, corrects some initially recognized errors, and has improved formatting to make the information easier to understand. DPH staff has worked diligently to help ensure this compendium of data is the most complete and accurate information that is available to date on a statewide basis. DPH fully expects further revisions may be necessary in some cases and wishes to work with DEP, the water industry, and any other interested parties to ensure the most accurate margin of safety data is available on a statewide basis to complement the efforts of our agencies. Thank you and please contact me if you have further questions regarding the revised submittal.

Sincerely,

Ellen Blaschinski, Branch Chief Regulatory Services Branch



Phone: (860) 509-7333

Telephone Device for the Deaf (860) 509-7191

410 Capitol Avenue - MS # 51WAT

P.O. Box 340308 Hartford, CT 06134

Affirmative Action / An Equal Opportunity Employer

Public Water System: Aquarion - Ball Pond

Towns Served: New Fairfield

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	0.06	0.04	602



Average Daily Demand (ADD), (MGD)			(MGD)	Maximum Monthly Average Daily Demand Maximum Daily Demand (MDD) (MMADD), (MGD)	), (MGD)
1	F	20-vear	50-year	Current 5-year 20-year 50-year Current 5-year 20-year	50-year
Current	5-year		JU-year	0.051 0.050 0.056 0.075 0.064 0.084 0.095	0.126
0.043	0.042	0.047	0.063	Secretary 1. US Telephone description of the secretary of	

!	MOS	(MMADD) v	vithout	streamflow
	Current	5-year	20-y	ear 50-year
	0.78	0.80	0.7	1 0.53
Minimum Adequate Margin of Safety	NO	NO	NC	ON

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.

\* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Aquarion - Greater Bridgeport

Towns Served: Bridegport, Easton, Fairfield, Monroe, Redding, Shelton, Stratford, Trumbull, Weston, Westport, Wilton

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Groundwater	90.20	105.53	352135



Connecticut Department of Public Health

Average Daily Demand (ADD), (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)			Maximu	m Daily Der			
Current         5-year         20-year         50-year           47.542         48.908         53.666         58.832	Current 64.410	5-year 74.270	<b>20-year</b> 83.400	<b>50-year</b> 94.240	77.150	<b>5-year</b> 87.700	<b>20-year</b> 98.630	50-year 111.290

	MOS (ADD) without streamflow
	Current 5-year 20-year 50-year
	2.22 2.16 1.97 1.79
Minimum Adequate Margin of Safety	YES YES YES YES
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Margin of Safety - The unitless ratio of available water to demand.

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Aquarion - Cornwall

Towns Served: Cornwall

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	0.05	0.05	97



Average Daily Demand (ADD), (MGD)			(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximum Daily Demand (MDD), (MGD)			
Current	5-vear	20-vear	50-vear	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
0.008	0.011	0.012		0.010 0.016 0.017 0.018	0.015	0.022	0.024	0,025
0.000	0.011	0.012	0.012	The state of the s				

	MOS (	MMADD) w	thout streamflow
	Current	5-year	20-year 50-year
	5.40	3:38	3.18 3.00
Minimum Adequate Margin of Safety	YES	YES	YES YES

Margin of Safety - The unitless ratio of available water to demand.

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Aquarion - East Hampton

Towns Served: East Hampton

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	0.03	0.03	132



Γ	Aver	age Daily D	emand (ADD)		Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximum Daily Demand (MDD), (MGD)			
ŀ	Current	5-vear	20-vear	50-vear	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
H	0.007	0.007	0.007	0.007	0.011 0.011 0.011	0.013	0.015	0.015	0.015
L	0.007	0.007	0.007	0.007	PROVINGENCY CONTROL OF				

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	2.45 2.45 2.45
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Aquarion - Hawkstone

**Towns Served: Seymour** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	0.05	0.05	121



Aver	age Daily D	emand (ADD)		Maximum Monthly Average Daily Demand (MMADD); (MGD)		m Daily Dei	mand (MDD)	
Current	5-year	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-уеаг	50-уеаг
0,014	0.010	0.007	0.007	0.017 0.023 0.016 0.016	0.018	0.026	0,018	0.018
0.014	0.010	0.007	0.001	A STATE OF THE PARTY OF THE PAR				

•	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	2.94 2.17 3.13 3.13
Minimum Adequate Margin of Safety	YES YES YES YES

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Aquarion - Kent

Towns Served: Kent

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Ground Water	0.39	0.39	820



Aver	age Daily De	emand (ADD),	(MGD)	Maximum Monthly Average Dally Demand (MMADD), (MGD)	Maximu	m Daily Der	nand (MDD	), (MGD)
Current	Evon	20-year	50-year	Current 5-year 20-year 50-year	Current	5-уеаг	20-year	50-year
Current	5-year		0.102	0.123 0.140 0.134 0.136	0.137	0.188	0.179	0.182
0.110	0.105	0.100	0.102					

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	3.14 2.76 2.88 2.84
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

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Public Water System: Aquarion - Lakeside

**Towns Served: Southbury** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	0.14	0.14	434



Aver	age Daily D	emand (ADD),	, (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily Der	nand (MDD)	), (MGD)
Current	5-vear	20-vear	50-vear	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
0.095	0.047	0.035	0.035	0.130 0.071 0.052 0.052		0.105	0.077	0.077

Ī	MOS (MMADD) without streamflow	
	Current 5-year 20-year 50-year	
	2.03 2.77 2.77	
Minimum Adequate Margin of Safety	NO YES YES YES	

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Public Water System: Aquarion - Lebanon

Towns Served: Lebanon

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	0.03	0.03	166



Aver	age Daily D	emand (ADD),	(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily De	nand (MDD	), (MGD)
Current	5-vear	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
0.013	0.011	0.012		0.016 0.014 0.015 0.015	0.020	0.018	0.019	0.018

· ·	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1,88 2.14 2.00 2.00
Minimum Adequate Margin of Safety	YES YES YES YES

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Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Aquarion - Litchfield

Towns Served: Goshen, Litchfield

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	0.71	0.43	2465



Ave	rage Daily D	emand (ADD)	, (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximur	n Dally Dem		
Current	5-vear	20-vear	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
Current	0.306	0.332	0.413	0.548 0.406 0.440 0.548	0.805	0.597	0.647	0.805
0.286	0.300	0.332	0.710		****			

·	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	0.79 1.06 0.98 0.79
Minimum Adequate Margin of Safety	NO NO NO

Margin of Safety - The unitless ratio of available water to demand.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

<sup>\*</sup> Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.

<sup>\*\*</sup> When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

Public Water System: Aquarion - Main (Valley)

Towns Served: Beacon Falls, Oxford, Seymour

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Groundwater	4.89	4,89	14108



Aver	age Daily D	emand (ADD),	, (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily Dei	mand (MDD)	
Current	5-vear	20-year	50-vear	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
1.58	1.56	1.63	1.91	1,94 2.04 2.12 2.49	2.35	2.91	3.03	3,55
1.00	1,00	1100						

	MOS (	MMADD) w	ithout streamflow
	Current	5-year	20-year 50-year
			2.31 1.96
Minimum Adequate Margin of Safety	YES	YES	YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

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- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.

\* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Aquarion - Mystic

**Towns Served: Groton, Stonington** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Groundwater	2.00	2.43	14209



Source Court Floor 20 year Current 5-year				(MMADD), (MGD)				
Current 5-year 20-year 50-year Current 5-year 20-year Current 5-year	urzont	5-year 20-y	ear 50-vear	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
171 1.78 1.77 1.89 2.38 2.55 2.53 2.71 2.75 2.87	4 74	- 1000		2.38 2.55 2.53 2.71	2.75	2.87	2.85	3.04

MOS (MMADD) without streamflow
Current 5-year 20-year 50-year
0.90 0.90

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

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- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
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Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Aquarion - Norfolk

Towns Served: Norfolk

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface Water	0.73	0.40	955



Average Daily Demand (ADD), (MGD) (MMADD), (MGD) (MMADD), (MGD)  Average Daily Demand (ADD), (MGD) (MMADD), (MGD)  Current 5-year 20-year 20-y	
Current         5-year         20-year         50-year         20-year         20-year         20-year         20-year         20-year         20-year         20-year         20-year <td><b>50-year</b> 0.275</td>	<b>50-year</b> 0.275

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	3,39 2.92 2.86 2.35
	YES YES YES YES
Minimum Adequate Margin of Safety	

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Average day demands are reasonable to consider for this type of system due to the following:

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- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accomodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

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Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Aquarion - North Canaan

Towns Served: North Cannon

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	0.61	0.61	1406



Aver	age Daily D	emand (ADD),	(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	n Daily Dei	nand (MDD)	
0	E .voor	20-vear	50-year	Gurrent 5-year 20-year 50-year	Current	5-year	20-year	50-year
Current	5-year		0.327	0.342 0.418 0.407 0.412	0.389	0.524	0.510	0.515
0.289	0.332	0.323	0.321					·

	MOS (MMADD) without streamflow
	Gurrent 5-year 20-year 50-year
	1.78 1.46 1.50 1.48
Minimum Adequate Margin of Safety	YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Average day demands are reasonable to consider for this type of system due to the following:

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- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

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Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Aquarion - Ridgefield I & 2 (Includes Barnum & Mckeon)

Towns Served: Ridgefield

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Ground Water	1.80	1,71	7926



Connecticut Department

I	Average Daily Demand (ADD),	(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximum	Daily Den	nand (MDD),	(MGD)
	Current 5-year 20-year	<b>50-year</b> 1.465	Current         5-year         20-year         50-year           1.095         1.328         1.651         1.875	Current 1,400	5-year 1.595	20-year 1.982	50-year 2.251

	MOS (MMADD) without streamflow
•	Current 5-year 20-year 50-year
	1.56 1.29 1.04 0.91
Minimum Adequate Margin of Safety	YES YES NO NO

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

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- Large amounts of storage are not available in a groundwater source or small reservoir.
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Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Aquarion - Salisbury

Towns Served: Salisbury

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Ground Water	1,43	1,13	1906



Γ	Averag	e Daily De	emand (ADD),	(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily Der	nand (MDD	), (MGD)
$\vdash$		£	20-vear	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
-	Current	5-year	0.350	0.365	0.569 0.517 0.480 0.488	0.733	0.650	0.604	0.614

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
<u></u>	1.98 2.18 2.35 2.31
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Aquarion - Simsbury

Towns Served: East Granby, Granby, Simsbury

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Groundwater	4.68	4.91	15258



Aver	age Daily D	emand (ADD),	(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily Der	nand (MDD)	), (MGD)
Current	5-vear	20-vear	50-vear	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
Current	2.37	2.44	2.59	342 409 421 447	4.12	5.45	5.61	5.96
2.10	2.01	2.44	2.00					

-	
•	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	<b>1.44 1.20 1.17 1.10</b>
Minimum Adequate Margin of Safety	YES YES NO

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Aquarion - SW Fairfield County

Towns Served: Darien, Greenwich, New Canaan, Stamford, Wilton; AWC-NY

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Ground Water	38.79	54.43	180387



Average Daily Demand (ADD), (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)				Maximu	m Daily Der	nand (MDD)	
Current 5-year 20-year 50-year	Current	5-year	20-year	50-year	Current	5-year	20-year	50-year
34.728 34.495 35.839 38.066	52,590	51.740	53.760	57.100	61.110	60.370	62.720	66.610

	MOS (ADD) without streamflow
	Current 5-year 20-year 50-year
	1.57 1.58 1.52 1.43
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.

\* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

**Public Water System: Aquarion - Timber Trails** 

Towns Served: New Fairfield, Sherman

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	0.09	0.06	315



Aver	age Daily D	emand (ADD)	, (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily De	mand (MDD)	), (MGD)
Current 1	Evon	20-vear	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
Current	5-year		Ju-year	0.028 0.035 0.035 0.035	0.040	0.039	0.039	0.039
0.021	0.020	0.020	0.020	0.020	0.040	0.000	0.000	0.000

_	MDS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	2.25 1.80 1.80 1.80
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

**Public Water System: Avon Water Company** 

Towns Served: Avon, Canton, Simsbury

Source Water Type	Safe Yield	Available Water	Population
Ground Water	4.19	3.19	11,590



of Public Health

(400)	Maximum Monthly Average Daily Demand	Maximum Daily Demand (MDD), (MGD)
Average Daily Demand (ADD), (MGD)  Current 5-year 20-year 50-year	Current 5-year 20-year 50-year	Current         5-year         20-year         50-year           2.87         3.44         3.66         4.41
1.59 1.64 1.75 2.1	not available	2.01

MOS (MMADD) without streamflow  Current 5-year 20-year 50-year  #VALUE! #DIV/0! #DIV/0! #DIV/0!	Lambert Committee of the Committee of th	The state of the s
Current Swear 20-year bu-year		MOS (MMADD) without streamflow
Current Joyca #DIV/01 #DIV/01		50-year 50-year
		SUITERLE STORY OF SHOWING STORY
STVALUES STUTION STUTI		#VALUE #UIVU F #UIVU F F #UIVU
Misleyum Adequate Margin of Safety #VALUEL #DIV/0! #DIV/0! #DIV/0!		#DIVIOL #DIVIOL #DIVIOL
Minimum Adequate Margin of Safety #VALUE! #DIVIO! #DIVIO! #DIVIO!	Minimum Adequate Margin of Safety	Security of the Control of the Contr

Margin of Safety - The unitless ratio of available water to demand.

\* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

<sup>\*\*</sup> When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

Public Water System: Berlin Water Control Commission

Towns Served: Berlin

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Groundwater	3.72	2.76	5128



Avei	age Daily D	emand (ADD),	(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily Der	nand (MDD)	, (MGD)
<u> </u>		20.45-5	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
Current	5-year	20-year		276 391	2.24	2.62	3.22	4.56
1.49	1.75	2.30	3.26			<u></u>		

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1.42 1.21 1.00 0.70
Minimum Adequate Margin of Safety	YES YES NO NO

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Bethel Water Department

Average Daily Demand (ADD), (MGD)

Towns Served: Bethel

5-year

0.96

Current

0.94

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Ground Water	1.36	1.36	9,507

20-year



Maximum Monthly Average Daily Demand	Maximum Daily Demand (MDD), (MGD)			, (MGD)
C 1 Francis 20 year 50 year	Current	5-year	20-year	50-year
Current 5-year 20-year 50-year	1.4	1.44	1.48	1.6

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1.32 1.30 1.26 1.15
Minimum Adequate Margin of Safety	YES YES YES
CONTROL OF A CLASSIC CONTROL OF THE	

Margin of Safety - The unitless ratio of available water to demand.

50-year

\* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.

\*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of supply for each calendar month by the number of days in that month and expressed in gallons per day.

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Bristol Water Department

**Towns Served: Bristol** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Ground Water	6.87	6.87	52,097

A margin of safety for this system is awaiting safe yield tests on the ground water supply.



Average Daily Demand (ADD), (MGD)		), (MGD)	Maximum Monthly Average Dally Demand (MMADD), (MGD)	Maximum Daily Demand (MDD), (MGD)				
Current	5-vear	20-vear	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
5.43	6.08	6.75	7.87	7:37 8:26 9:17 10.69	10.39	11.63	12.92	15.06

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	0.93 0.83 0.75 0.64
IMINIMUM Adequate Margin of Safety	NO NO NO NO

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Candlewood Shores Tax District

Towns Served: Brookfield

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Groundwater	0.19	0.19	1,315

Average Daily Demand (ADD), (MGD)



Maximum Daily Demand (MDD), (MGD)

		,		(MINADO) (MOD)			00	50-vear
Current	5-vear	20-уеаг	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	
0.08	0.08	0.08	0.09	0.09 0.09 0.1	0.12	0.12	0.12	0.13
<u> </u>								
					MOS	(MMADD) w	rithout strea	mflow
					Current	5-year	20-year	50-year
- '					2.11	2.11	1.90	1.73

Maximum Monthly Average Daily Demand

(MMÁDD), (MGD)

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

Minimum Adequate Margin of Safety

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Colchester Water Department

**Towns Served: Colchester** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Groundwater	0.74	0.52	4,001



Ave	rage Daily D	aily Demand (ADD), (MGD)  Maximum Monthly Average Daily D (MMADD), (MGD)		Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maxim	<u>-</u>	mand (MDD),	
Current	5-vear	20-vear	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
0.44	0.55	0.66	0.9	0.52 0.66 0.79 1.08	0.62	0.77	0.93	1.26
0.44	0.00	0.00	<u> </u>	**CAMMON CONTRACT CON		***		

•	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1.00 0.79 0.66 0.48
Minimum Adequate Margin of Safety	NO NO NO NO

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Connecticut Valley Hospital

Towns Served: Middletown

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface water	0.69	0.69	3132



Party Persond (ADD) (MGD)	Maximum Monthly Average Dally Demand	Maximu	m Daily Der	nand (MDD),	(MGD)
Average Daily Demand (ADD), (MGD)           Current         5-year         20-year         50-year           0.3         0.32         0.38         0.51	(MMADD), (MGD)   Current   5-year   20-year   50-year     0.37   0.39   0.47   0.62	Current 0.56	<b>5-year</b> 0.59	<b>20-year</b> 0.71	<b>50-year</b> 0.94
0.3 0.32 0.38 0.37		MOS	MMADD) w 6-year	ithout stream 20-year	nflow 50-year

	MOS (MMADD) without streamflow
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Minimum Adequate Margin of Safety	
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Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accomodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Cromwell Fire District

Towns Served: Cromwell

Source Water Type MG	ield, Available D Water, MGD	Population
Ground Water not ava	ilable 4.896	12825



YES

YES

NO

	Maximum Monthly Average Daily Demand	Maxim	um Daiiy De	mand (MDD),	(MGD)
Average Daily Demand (ADD), (MGD)  Current 5-year 20-year 50-year	(MMADD), (MGD)  Current 5-year 20-year 50-year	Current 3.23	5-year 5.56	20-year 6	50-year 7.44
Current         5-year         20-year         50-year           1.77         2.24         2.24         3	2.2 3.61 3.9 4.83			en en en en en en en en en	n flow
		MOS Current		vithout stream	50-year

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

Minimum Adequate Margin of Safety

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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  - periods without incurring long term deliterous effects to the supply.
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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: CT Correctional

Towns Served: Enfield

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	0.98	0.98	5460



Ave	rage Daily D	emand (ADD)	, (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)  Maximum Daily Demand (	(MDD), (MGD)
		20-vear	50-vear	Current 5-year 20-year 50-year Current 5-year 20-	year 50-year
Current	5-year	0.63	0.68	0.88 0.87 0.87 0.95 not available 1.24 1	.24 1.36
0.74	0.63	0.63	0.00	Section 1	

	Control of the Contro
	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
Minimum Adequate Margin of Safety	

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: CT Water Company - Country Mobile

Towns Served: Griswold

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground water	0.08	0.02	186



Ave	rage Daily D	emand (ADD)	(MGD)	Maximum Monthly Average Dally Demand (MMADD), (MGD)	Maximu	m Daily Dei	nand (MDD)	), (MGD)
<u> </u>	£ 110.00	20-year	50-vear	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
Current	5-year	20-year			0.020	0.017	0.016	0.017
0.010	0,009	0.009	0.009	0.010 0.010 0.010 0.010	0.020	0.017	0.010	0.017

	200 A 1 - 200 B 200 A 200 B 20
	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1.80 1.76 1.86 1.76
Minimum Adequate Margin of Safety	YES YES YES
Millitani Adequate margin of ocion	Control of the Contro

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: CT Water Company - Crystal

Towns Served: Killingly, Brooklyn

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Ground water	5.42	1.51	6378



Average Daily Demand (ADD), (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximum Daily	 
Current         5-year         20-year         50-year           1 198         1 226         1 361         1,597	Current         5-year         20-year         50-year           1:388         1:485         1:647         1:933	Current         5-ye           1.882         2.06	 <b>50-year</b> 2.685

Available water reflects commitment to Energy Plant.	MOS (MMADD) without streamflow  Current 5-year 20-year 50-year
	1.09 1.02 0.92 0.78
Minimum Adequate Margin of Safe	y NO NO NO

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
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The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: CT Water Company - Gallup

Towns Served: central portion of Plainfield

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground water	2,26	0.45	2538



Ave	rage Daily D	emand (ADD),	(MGD)	Maximum Mo	nthly Average MMADD), (MGI		Maximu	m Daily Den	nand (MDD)	), (MGD)
Current 0.330	5-year 0.330	<b>20-year</b> 0.360	<b>50-year</b> 0.420	Current 5	-year 20-	The second secon	Current 0.540	<b>5-year</b> 0.510	<b>20-year</b> 0.560	50-year 0.650

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1.22 1.10 0.94
Minimum Adequate Margin of Safety	YES YES NO NO

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
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The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Public Water System: CT Water Company, Naugatuck Region, Central System

Towns Served: Portions of Towns of Beacon Falls, Bethany, Prospect, Naugatuck, Moddlebury, Waterbury; also two consecutive systems of Heritage-Middlebury and Hillcrest Fire District

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Groundwater	4.75	4.29	21980



Average Daily Demand (ADD), (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximum D	ally Demand (MDD)	, (MGD)
Current 5-year 20-year 50-year	Current   5-year   20-year   50-year   3:23   3:20   3:44   4:39	041.4.7.	-year 20-year 3.93 4.23	<b>50-year</b> 5.40
2,86 2.78 2.99 3.83	1	MOS (MM	ADD) without strea	mflow 50-year

	Charles Control of the Control of th
	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1.33 1.34 1.25 0.98
	YES YES NO
Minimum Adequate Margin of Safety	Control of the Contro

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
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Public Water System: CT Water Company, Naugatuck Region, Collinsville System

Towns Served: Canton, Collinsville, an area in NW of Avon, small area in

**NE section of Burlington** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface Water	2.3	1.65	6324



Avei	age Daily De	mand (ADD),	(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily Der	nand (MDD)	), (MGD)
Current	5-vear	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
0.448	0.436	0.479	0.621	0.674 0.618 0.679 0.881	0,901	0.804	0.883	1.146

Safe yield and available water reflect purchase of 1 MGD from Avon Water Department.	MOS (MMADD) without streamflow
Sale yield and available water relief pulchase of 1 MOD from 7 Valor Page 1880.	Current         5-year         20-year         50-year           2.45         2.67         2.43         1.87
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
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Public Water System: CT Water Company, Northern Region, Lakewood/Lakeview System

Towns Served: Isolated areas of Bolton and Coventry

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Conveduatelet	0.05513	0.033	490



Ground water U.05513   0.000		(1407)
		Maximum Daily Demand (MDD), (MGD)
Average Daily Demand (ADD), (MGD)	(MMADD); (MGD)	Current 5-year 20-year 50-year
50-year	Current 5-year 20-year 50-year 0.031	Culteria
0.025 0.025 0.025 0.026	0.031 0.029 0.029	
0.020	i i	MOS (MMADD) without streamflow

V.001	
	MOS (MMADD) without streamflow
	MOS (WMADD) MIDIOTE STREET
	The same in Driver in 50 year in
	1.06 L14 1.14 1.06
	1.06
	NO NO NO NO
Margin of Salety	
Minimum Adequate Margin of Safety	

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
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- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accomodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: CT Water Company, Northern Region, Llynwood System

Towns Served: Isolated areas of Bolton and Coventry

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground water	0.02984	0.031	192



Ave	age Daily Do	emand (ADD),	(MGD)	(MMADD); (MGD)		m Daily Der		
Current	5-year	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
0.008	0.009	0.009	0.01	0.011 0.011 0.012 0.012				

	MOS (MMADD) without streamflow	
	Current 5-year 20-year 50-year	
	2.82 2.82 2.58 2.58	100
Minimum Adequate Margin of Safety	YES	

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely
  over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

**Available Water** - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: CT Water Company, Northern Region, Nathan Hale System

Towns Served: Isolated areas of Bolton and Coventry

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Cround water	0.0216	0.011	160



Avei	age Daily D	emand (ADD),	(MGD)	(MMADD), (MGD)	Maximum Daily Demand (MDD), (MGD)  Current 5-year 20-year 50-year
Current 0.004	5-year 0.006	<b>20-year</b> 0.006	<b>50-year</b> 0.007	Current         5-year         20-year         50-year           0.005         0.008         0.008         0.008	Current 5-year 20-year 50-year

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	2.20 1.38 1.38 1.38
Minimum Adequate Margin of Safety	YES YES YES
William Adodusto 1/2:51	

Margin of Safety - The unitless ratio of available water to demand.

\* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.

\*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
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Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: CT Water Company, Northern Region, Stafford System

Towns Served: Portion of Stafford

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Ground water	0.9	0.7	2383



Ave	rage Daily D	emand (ADD)	, (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily Dei	nand (MDD)	), (MGD)
Current	5-vear	20-vear	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
0.48	0.49	0.51	0.54	0.52 0.55 0.58 0.6	0.7	0.72	0,75	0.79

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
•	1 35 1.27 1.21 1.17
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Average day demands are reasonable to consider for this type of system due to the following:

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Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: CT Water Company, Northern Region, Western + Somers System

Towns Served: Portions of East Windsor, East Granby, Ellington, Enfield, Somers, South Windsor, Suffield, Tolland, Vernon, Windsor

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Ground water	24.53	14.08	75737



Current 5-year 20-year 50-year Current 5-year 20-year 30-year	Average Daily Demand (ADD), (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)			Average Daily Demand (ADD), (MGD)  Maximum Monthly Average Daily Demand (MMADD), (MGD)  Maximum Daily Dema			nand (MDD)	
100 1 1		Current			50-year				50-year
		12.35	12.6	13.8	17	15.7	15.35	16.81	20.71

	MOS (ADD) without streamflow
	Current 5-year 20-year 50-year
	Conseile C (Cor
	1.44 1.38 1.26 1.02
	1.44 1.00 1.29 1.92
Minimum Adamusta Margin of Safety	YES YES YES NO
Minimum Adequate Margin of Safety	PACE COMMON ACCORDING CONTROL COMMON

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

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- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: CT Water Company - Plainfield

Towns Served: portion of Plainfield

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
	1.50	0.75	1713



Giguite agos		
(46D)		Maximum Daily Demand (MDD), (MGD)
Average Daily Demand (ADD), (MGD)	(MMADD); (MGD)	Current 5-year 20-year 50-year
Current 5-year 20-year 50-year	Current 5-year 20-year 50-year	0,304 0,354 0,383 0,481
0.200 0.193 0.209 0.262	0.210	

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	Current 3 year 3 50
	3.49 3.52 3.25 2.59
Minimum Adequate Margin of Safety	YES YES YES YES
Minimum Adequate watgin of ouror)	.21

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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- Large amounts of storage are not available in a groundwater source or small reservoir.
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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: CT Water Company, Shoreline-Guilford & Chester

Towns Served: Portions of Towns of Guilford, Madison, Clinton, Westbrook, Old Saybrook, Chester, Deep River, Essex; Also small satellite systems in Chester, Old Lyme, Voluntown, Griswold, Stonington

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Groundwater	9,71	8.21	41600



Average Daily Demand (ADD), (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	·	-
Current 5-year 20-year 50-year	Current 5-year 20-year 50-year 7-24 8-00 8-82 10-93	Current         5-year         20-year         50-year           5.55         6.43         7.07         8.74	_
4.05 4.36 4.80 5.95	Historical Control of the Control of	MOS (MMADD) without streamflow	

	MOS (MMADD) without streamflow:
	Current 5-year 20-year 50-year
	13 103 0.93 0.75
	NO NO NO NO
Minimum Adequate Margin of Safety	

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: CT Water Company, Terryville System

**Towns Served: Plymouth** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground water	1.51	1.2	3020



Aver	Average Daily Demand (ADD), (MGD)			(MMADD), (MGD)		m Daily Der	nand (MDD)	
Current	5-year	20-year		Gurrent 5-year 20-year 50-year	Current	5-year	20-year 0.72	<b>50-year</b> 0,85
0.41	0.41	0.45	0.53	0.45 0.46 0.51 0.6	0.59	0.65	0.72	0.00

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	2.67 2.61 2.35 2.00
Minimum Adequate Margin of Safety	YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: CT Water Company, Thomaston System

Towns Served: Thomaston, small portion of Plymouth

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground water	0.95	0.72	5047



Ave	age Daily D	emand (ADD),	(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily Der	nand (MDD)	), (MGD)
Current	5-year	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
0.51	0.53	0.57	0.71	0.58 0.6 0.65 0.82	0,86	0.92	0.99	1.25

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1.24 1.20 1.11 0.88
Minimum Adequate Margin of Safety	YES YES NO NO

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: CT Water Company - Thompson

**Towns Served: portion of Thompson** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground water	0.34	0.22	1070



Average Daily Demand (ADD), (MGD)		maximum Monthly Average Daily Demand (MMADD), (MGD) (MMADD), (MGD)				Maximum Daily Demand (MDD), (MGD)			
Current	Fugar	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year	
Current	5-year	0.164	0.179	0 183 0 182 0 183 0 201	0,255	0.258	0.259	0.284	
0.162	0.163	0.104	0.110						

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	121 120
Minimum Adequate Margin of Safety	YES YES YES NO

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.

\* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: CT Water Company, Integrated Unionville/FIP

Towns Served: Central & Western area of Farmington and small area of southwestern area of Avon

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground water	***************************************	4.966	19726



Ave	rage Daily D	emand (ADD),	(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily Dei	mand (MDD)	), (MGD)
Current	5-year	20-year	50-уеаг	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
1.939	1.998	2.083	2.325	2.817 2.9 3.024 3.375	3.495	3.601	3.755	4.191

•	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1.76 1 1.71 1.64 1.47
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

**Public Water System: Danbury Water Department** 

Towns Served: Danbury, Bethel, Ridgefield

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface Water	8.2	8.2	62,000



Average Daily Demand (ADD), (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)			Maximu	ım Daily De	mand (MDD),	(MGD)	
Current 5-year 20-year 50-year	Current	5-year	20-year	50-year	Current	5-year	20-year	50-year
7.48 7.81 9.16 11.46	8.61	8.59	10.08	12.61	9.71	10.15	11.91	14.9
- Anny St. Co. Co. Co. Co. Co. Co. Co. Co. Co. Co								

,	TO STATE OF THE PROPERTY OF TH
	MOS (ADD) without streamflow
İ	Current 5-year 20-year 50-year
	1.05 0.90 0.72
Minimum Adequate Margin of Safety	NO TO NO
Minimum Adequate margin of Salety	NO N

Margin of Safety - The unitiess ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year.

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of supply for each calendar month by the number of days in that month and expressed in gallons per day.

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Department of Corrections, Montville

**Towns Served: Montville** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	0.226	0.226	1689



Company of the Compan	Maximum Monthly Average Dally Demand	Maximum Daily Demand (MDD), (MGD)
Average Daily Demand (ADD), (MGD)	(MMADD), (MGD)	Current 5-year 20-year 50-year
Current 5-year 20-year 50-year	Current 5-year 20-year 50-year 0.181 0.204 0.198 0.193	0.265         0.278         0.27         0.264
0.17         0.18         0.177         0.172	V 101	MOS (MMADD) without streamflow

and the state of t	
	MOS (MMADD) without streamflow
	Current 5-year 20-year au-year
- Safety	YES NO INC.
Minimum Adequate Margin of Safety	Talk Andrew Control of the Control o

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: East Hampton WPCA

Towns Served: East Hampton

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Groundwater	0.56	0.56	328



Avei	rage Daily D	emand (ADD)	, (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maxim	um Daily De	mand (MDD)	
Commont	Event	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
0.49	5-year 0.93	1	1.25	0.59 1.11 1.19 1.49	0.86	1.63	1.74	2.19

	MOS (MMADD) without streamflow
	50 year
	EXCUITE TO STATE TO S
	0.95 0.50 0.47 0.38
	NO N
Minimum Adequate Margin of Safety	The state of the s

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: East Lyme Water & Sewer Commission

Towns Served: East Lyme

1		Safe Yield,	Available	Population
	Source Water Type	MGD	Water, MGD	1 opalation
	Ground Water	3.69	2.77	15,245
	Carried State of the Control of the			



Δνοι	age Daily D	emand (ADD)	, (MGD)	Maximum Monthly Av (MMADD	verage Daily Demand	Maximun	Daily Der	nand (MDD	), (MGD)
Current	5-vear	20-year	50-year	Current 5-year	20-year 50-year	Current	5-year	20-year 4.38	<b>50-year</b> 6.78
1.96	2.07	2.62	4.06	2,41 2.55	3,23 4.99	3.27	3.46	4.50	0.70

	MOS (MMADD) without streamflow  Current 5-year 20-year 50-year
	1.15 1.09 0.86 0.56
	YES NO NO NO
Minimum Adequate Margin of Safety	Control of the Contro

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Ellington Acres Water Company (now owned by CTWC)

Towns Served: Ellington, two buildings in southern part of Somers

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Casundurator	0.38	0.38	2342



Gionno words		(105)
(ADD) (MCD)	Maximum Monthly Average Daily Demand	Maximum Daily Demand (MDD), (MGD)
Average Daily Demand (ADD), (MGD)		Current 5-year 20-year 50-year
Current 5-year 20-year 50-year	Current 5-year 20-year 50-year	0.41 0.72 1.22 1.34
0.21 0.37 0.63 0.70	0:30	

Company of the Compan	
	MOS (MMADD) without streamflow
	MOS (MMADD) WILLIAM SGEDING
	Current 5-year 20-year 50-year
	1 24 1 0.68 1 0.40 1 0.50
Minimum Adequate Margin of Safety	YES NO NO NO
I WITH THE PROPERTY OF THE PRO	

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Hazardville Water Company

Towns Served: Enfield, East Windsor

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Gound Water	4.3	4.3	17,744



Ave	rage Daily D	emand (ADD)	, (MGD)	Maximum Monthly Average Dally Demand (MMADD), (MGD)	Maxin	num Daily De	mand (MDD),	(MGD)
				Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
Current	5-year	20-year	50-year	2 03 2 2 64 3 05 4 13	2.99	3.68	4.42	5.98
1.56	1.84	2.21	2.99			1	<u></u>	

1	MOS (MMADD) without streamflow
	Gurrent 5-year 20-year 50-year
	2.12 1.69 1.41 1.04
Minimum Adequate Margin of Safety	YES YES YES NO

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Heritage Village Water Company, Southbury

Towns Served: Southbury, Middlebury, Oxford

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Groundwater	2.052	2.252	7300



Ave	rage Daily D	emand (ADD),	(MGD)	Maximum Monthly Average Dally Demand (MMADD), (MGD)	Maximu	m Daily Der	nand (MDD)	, (MGD)
Current	5-year	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
1.10	1.11	1.25	1.42	1.48 1.48 1.67 1.89	1.88	1.82	2.05	2.32

Available water for 5-year and 20-year Includes 0.2 MGD from CTWC interconnection

Available water for 50-year includes 0.5 MGD from CTWC interconnection

-	MOS	MMADD) w	ithout strea	mflow
			20-year	
			1.35	
	YES	YES	YES	YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

Minimum Adequate Margin of Safety

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely
  over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Groton Long Point

**Towns Served: Groton** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
A Custam	not applicable	0.3	2400



of Public Health

Consecutive System not applicable 0.3 2400	Marierum Paily Demand (MDD), (MGD)
Average Daily Demand (ADD), (MGD) Maximum Month	ly Average Daily Demand Maximum Daily Demand 50-year 50-year
Average Daily Demand 50-year Current 5-year	ar 20-year 50-year Current 5-year 20-year 00-year 00-y
Current         5-year         20-year         3-year         3-yea	
V.11 _ 1	WOS (MMADD) without streamflow

<u>U.76</u>	(Apply of the million
	MOS (MMADD) without streamflow  Current   5-year   20-year   50-year
	1.15 1.00 1.00
Minimum Adequate Margin of Safety	YES NO

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for
  - extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely
  - over an extended time period to accomodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of supply for each calendar month by the number of days in that month and expressed in gallons per day.

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

**Public Water System: Groton Utilities** 

Towns Served: Groton, Ledyard, Montville

Source Water Type	Safe Yield, MGD	11	
Surface Water	12.6	12.6	30,200



Average Daily Demand (ADD), (MGD)	Maximum Daily Demand (MDD), (MGD)			D) Maximum Monthly Average Daily Deman (MMADD), (MGD)				
Current 5-year 20-year 50-year	Current	5-year	20-year	50-year	Current	5-year	20-year	50-year
6.76 8.55 9.54 10.76	9.42	13.83	15.52	17.46	7.95	10.86	12.12	13.67

	MOS (ADD) without streamflow
	Current 5-year 20-year 50-year
	1.86 1.47 1.32 1.17
Minimum Adequate Margin of Safety	YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Jewett City Water Company

**Towns Served: Jewett City** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
-Surface/Groundwater	1.15	0.91	21980



Ave	rage Daily D	emand (ADD),	(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily Der	nand (MDD)	), (MGD)
Current	5-vear	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-уеаг	50-year
0.44	0.57	0.66	0.74	0.47 0.66 0.77 0.87	0.99	1.27	1.48	1.66

The WSP data for this system is wrong. The information needs to be corrected.

ted.	MOS (	MMADD) w	ithout strea	mflow
				50-year
	1.94	1.38	1.19	1.05
Meets MOS?	YES	YES	YES	NO -

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projectsions provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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  - Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accomodate high demand periods.

2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

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Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Lake Waubeeka

Average Daily Demand (ADD), (MGD)

**Towns Served: Danbury** 

Source Water Type	Safe Yield, MGD		
Groundwater	0.18	0.18	712



Maximum Daily Demand (MDD), (MGD)

				(MINADO), (MOD)				<b>50</b>
Current	5-year	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
0.054	0.052	0.056	0.056	0.095 0.114 0.124 0.124	0.079	0.067	0.073	0.073
5,551								
					MOS	(MMADD) v	rithout stream	nfløw
					Current	5-year	== 20-year	==50-year=
					1.89	1,58	1.45	1,45

Maximum Monthly Average Daily Demand

(MMADD), (MGD)

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

Minimum Adequate Margin of Safety

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of supply for each calendar month by the number of days in that month and expressed in gallons per day.

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Ledyard WPCA - Gales Ferry

Towns Served: Ledyard

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Consecutive System	0.25	0.25	2,054



A AMARIN (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)			Maxim	um Daily De	emand (MDD)	), (MGD)	
Average Daily Demand (ADD), (MGD)  Current 5-year 20-year 50-year	Current	(MMADD), 5-year 0,19	20-year 0,21	50-year 0.26	Current 0.2	<b>5-year</b> 0.25	20-year 0.27	<b>50-year</b> 0,34
0.13 0.14 0.15 0.19	0.16	0.19	0.21	0.20				

	The state of the s
	MOS (MMADD) without streamflow
	Current   5 year   20 year   50-year
	ESZ
Minimum Adequate Margin of Safety	YES YES YES YES
Millimum Adequate margin of cares	

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
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The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accomodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

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- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Ledyard WPCA - Highlands

Towns Served: Ledyard

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population	
Ground Water	0.51	0.51	2,400	



Average Daily Demand (ADD), (MGD)			(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximum Daily Demand (MDD), (		, (MGD)	
Current	Current 5-year 20-year 50-year		50-vear	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
0.15	0.19	0.2	0.21	018 023 023 026	0.24	0.32	0.33	0.36

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	2.83 2.22 2.22 1.96
	YES YES YES YES
Minimum Adequate Margin of Safety	

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Public Water System: Ledyard WPCA - Sablewoods

Towns Served: Ledyard

Source Water Type		Available Water, MGD	Population
Ground Water	0.25	0.05	2,054



Ground Water 0.23 1 0.00		Maximum Daily Demand (MDD), (MGD)
Average Daily Demand (ADD), (MGD)	Maximum Monthly Average Daily 2019	Current 5-year 20-year 50-year
Current 5-year 20-year 50-year	Current         5-year         20-year         30-year           0.16         0.19         0.21         0.26	0.2 0.25 0.27 0.34
0.13 0.14 0.15 0.19	Andrew Control of the	MOS (MMADD) without streamflow
		Current 5-year 20-year 50-year

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	0.31 0.26 0.24 0.19
Minimum Adequate Margin of Safety	NO NO NO
MINIMUM Adequate margo.	

- Margin of Safety The unitless ratio of available water to demand. \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Manchester Water Department

Towns Served: Manchester, South Windsor, Glastonbury, Vernon

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Ground water	11.01	9.18	51066



Average Daily Demand (ADD), (MGD)		(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)		Maximum Daily Demand (MDD), (MGD)			
Current	5-vear	20-year	50-vear	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
5.41	5.76	6.28	6.34	6.27 6.91 7.53 7.60	7,33	8.34	9.10	9.19
0.41	0.10	0.20						

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1.46 1.33 1.22 1.21
Minimum Adequate Margin of Safety	YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.

\* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Mashantucket Pequot Tribal Nation

Towns Served: Ledyard

Source Water Type	Safe Yield,	Available	Population
	MGD	Water, MGD	
Groundwater	2,22	2.22	41000
COPOGRAGA TO THE TOTAL T			



of Public Health

(MCD)	Maximum Monthly Average Daily Demand	Maximum Daily Demand (MDD), (MGD)
Average Daily Demand (ADD), (MGD)  Current 5-year 20-year 50-year	(MMADD), (MGD)  Current 5-year 20-year 50-year	Current         5-year         20-year         50-year           1.53         2.43         3.14         3.33
0.95 1.4 1.81 1.91		

<del></del>	
	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1/9 093 08/
Minimum Adequate Margin of Safety	The state of the s

Margin of Safety - The unitless ratio of available water to demand.

\* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.

\*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accomodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

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Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Metropolitan Distrcit Commission (MDC)

Towns Served: Member municipialities of Bloomfield, East Hartford, Hartford, Newington, Rocky Hill, West Hartford, Wethersfield, Windsor; Also portions of non-member towns of East Granby, Farmington, Glastonbury & South Windsor

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface Water	71,45	71.45	402297



Average Daily Demand (ADD), (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)			Maximum Daily Demand (MDD), (MGD				
Current 5-year 20-year 50-year	Current	5-year	20-year	50-year	Current	5-year	20-year	50-year
54.55 57.35 59.13 61.47	66.53	69.15	71.31	74.18	78.38	83,45	86.06	89.51

	MOS (ADD) without streamflow
	Current 5-year 20-year 50-year
•	131 125 121 116
Minimum Adequate Margin of Safety	YES YES YES YES
Minimum Adequate Margin of Salety	

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Meriden Water Department

Towns Served: Meriden, Wallingford

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Ground Water	8.61	8.61	58,441



	Maximum Mont	hly Average Daily	Demand	Maximu	m Daily Der	nand (MDD)	, (MGD)
Average Daily Demand (ADD), (MGD)  Current 5-year 20-year 50-year	(MA Current 5-ye 7.36 7.	MADD), (MGD) ear 20-year 8 7.6	50-year 8.1	Current 8.56	<b>5-year</b> 9.7	<b>20-year</b> 9.5	<b>50-year</b> 10.2
6.66   6.46   6.34   6.19	7.00			MOS	(MMADD) w	ithout strea	mflow

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	MOS (MMADD) without streamflow
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Minimum Adequate Margin of Safety	

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Middletown Water Department

**Towns Served: Middletown** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Groundwater	6,36	6.36	41019



Average Daily Demand (ADD), (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily Der	nand (MDD)	
Current 5-year 20-year 50-year	Current         5-year         20-year         50-year           5.25         6.42         7.20         8.63	Current 6.52	<b>5-year</b> 7.97	<b>20-year</b> 8.94	<b>50-year</b> 10.71

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	EQUITION C CO-CYCAICS C-240/EQ = 240/EQ
	1.21 0.99 0.88 0.74
Minimum Adequate Margin of S	afety YES NO NO NO
IMINIMUM Adequate margin or o	

Margin of Safety - The unitless ratio of available water to demand.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

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Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

<sup>\*</sup> Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.

<sup>\*\*</sup> When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

Public Water System: Montville W&WPCA

**Towns Served: Montville** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population	A
Consecutive System	N/A	0.93	12,825	]°

Available water supplied through interconnection with Groton is the maximum based upon the average daily demand.



Average Daily Demand (ADD), (MGD)	Maximui	m Monthly (	Ave. Daily D	emand)	Maxim	um Daily De	emand (MDD),	(MGD)
Current 5-year 20-year 50-year	Current	5-year	20-уеаг	50-year	Current	5-year	20-year	50-year
0.07	0.097	1.5	2.1	3.9	not provided	2	2.7	55

	MOS (ADD) without streamflow
	Current 5-year 20-year 50-year
	13,29 0.85 0.62
Minimum Adequate Margin of Safety	YES NO NO NO NO NO

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: New Britain Water Department

Towns Served: New Britain, Newington, Farmington, Plainville; also

indirectly Berlin

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Ground Water	17.64	17.64	73164



Average Dally Demand (ADD), (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)			Maximum Daily Demand (MDD), (MGD)				
Current 5-year 20-year 50-year	Current	5-year	20-year	50-year	Current	5-year	20-year	50-year
9.91 10.36 11.12 11.83		12.01	12.89	13.72	14.77	15.12	16.23	17.27

1	MOS (ADD) without streamflow
	Current 5-year 20-year 50-year
	1.78 1.70 1.59 1.49
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

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**Public Water System: New London Water Department** 

Towns Served: New London, Waterford

Source Water Type	Safe Yield	Safe Yield Available Water	
Surface Water	6.4	6.4	26,273



Average Daily Demand (ADD), (MGD)	Maximum Daily Demand (MDD), (MGD)			Maximum Monthly Average Daily Demai (MMADD), (MGD)				
Current 5-year 20-year 50-year	Current	5-vear	20-vear	50-year	Current	5-year	20-year	50-year
5.94 6.09 6.33 7.14	9.21	9.44	9.81	11.07	7.78	7.98	8.29	9.35

	MOS (ADD) without streamflow
	Gurrent         5-year         20-year         50-year           1.08         1.05         1.01         0.90
Minimum Adequate Margin of Safety	NO NO NO NO

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

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Public Water System: Noank Fire District

**Towns Served: Groton** 

Source Water Type	Safe Yield,	Available	Population	
Source Tate	MGD	Water, MGD	1 opalation	
Consecutive	not applicable	0.43	1947	



Ave	Average Daily Demand (ADD), (MGD)  Maximum Monthly Average Daily Demand (MMADD), (MGD)				nd	Maximu	m Daily De	mand (MDD)			
Current	5-vear	20-vear	50-vear	Current	5-year 2	0-year   50-y	year	Current	5-year	20-year	50-year
0.21	0.27	0.28	0.29	0.3	0.46	0.48 0.4	49		not av	ailable	

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	143 0.93 0.90 0.88
	YES NO NO NO
Minimum Adequate Margin of Safety	ACTION OF THE PROPERTY OF THE

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
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**Available Water** - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: North Stonington Water Department

**Towns Served: North Stonington** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Groundwater	not available	not available	5,048



Avera	ge Daily Den	and (ADD), (I	VIGD)	Maximum Monthly Average Daily Demand	Maxim	um Daily Der	nand (MDD),	(MGD)
Current	5-year	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
0.0011	O	0.116	0.229	0.0016 0.174 0.344	0.0021	0	0.232	0.458

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	#VALUEL #VALUEL #VALUEL #VALUEL
Minimum Adequate Margin of Safety	S#VALUEL S#VALUEL S#VALUEL

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely
  over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year.

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of supply for each calendar month by the number of days in that month and expressed in gallons per day.

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Norwalk 1st tax District

**Towns Served: Norwalk** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Ground Water	7.63	7.63	40,256



Aver	age Daily D	emand (ADD)	, (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily De	mand (MDD)	, (MGD)
Current	5-vear	20-vear	50-vear	Current 5-year 20-year 50-year	Current	5-уеаг	20-year	50-year
6.22	6.31	6.82	7.19	7.78 7.89 8.53 8.99	9.44	9.57	10.35	10.91

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	0.98 0.97 0.89 0.85
	NO NO NO NO
Infilinium Adequate margin vi. valory	

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

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- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.

\* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

**Public Water System: Norwich Public Utilities** 

Towns Served: Norwich, Preston, Franklin, Montville

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Groundwater	7.16	7.16	36,067



Average Daily Demand (ADD), (MGD)	Maximum	Monthly A	verage Daily	Demand	Maxim	um Daily Dei	mand (MDD),	(MGD)
Current 5-year 20-year 50-year	Current	5-year	20-year	50-year	Current	5-year	20-year	50-year
5.47 6.45 8.32 9.51	6.53	7.48	9.65	11.03	8.82	9.87	12.73	14.55

	MOS (ADD) without streamflow
	Current 5-year 20-year 50-year
	131-14-14-14-14-14-14-14-14-14-14-14-14-14
Minimum Adequate Margin of Safety	YES NO NO NO

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Olmstead Water Supply Company - Birches System

Towns Served: New Fairfield

Source Water Type	Sate Yield,	Available Water, MGD	Population
Groundwater	0.0157	0.0157	46



Maximum Daily Demand (MDD), (MGD)

Avera	ge Daily Der	nand (ADD),	(MGD)	Maximum Monthly Average Dally Demand	Maximum Daily Demand (MDD), (MGD)  Current 5-year 20-year 50-year
Current	5-year   0.002	20-year 0.002	50-year 0.002	Current         5-year         20-year         50-year           0.002         0.002         0.002         0.002	
0.002	0.002	0.002		1. MONOMARIA.	MOS (MMADD) without streamflow
					Current 5-year 20-year 50-year 7.85 7.85 7.85
				Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

\* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of supply for each calendar month by the number of days in that month and expressed in gallons per day.

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

<sup>\*\*</sup> When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

Public Water System: Olmstead Water Supply Company - Brookwood System

Towns Served: Brookfield

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Groundwater	0.0436	0.0436	250



Average Daily Demand (ADD), (MGD)				Maximum Monthly Accrege 7	Maximum Daily Demand (MDD), (MGD)  Current 5-year 20-year 50-year
Current	5-year	20-year	50-year	Current 5-year 20-year 50-year 0.038 0.044 0.044 0.044	not available 5-year   50-year   50-year
0.028	0.028	0.028	0.028	0.038 0.044 0.044	
				-	

;	MOS (MMADD) without streamflow
	Current 5-year 20-year 60-year
	1.15 0.99 0.99 0.99 VES NO NO NO
Minimum Adequate Margin of Safety	Market Control of the

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

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- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of supply for each calendar month by the number of days in that month and expressed in gallons per day.

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Olmstead Water Supply Company - Butternut System

Towns Served: Brookfield

Source Water Type Safe Yield, Available Water, MGD Population				
	Source Water Type	Safe Yleid,	7.00	Population
Groundwater 0.0284 0.0284 124	Connodwater	0.0004	0.0284	124



Average Daily Demand Current 5-year 20-	(ADD), (MGD) -year 50-year	Maximum Monutif Average Date -	Maximum Dally Demand (MDD), (MGD) urrent 5-year 20-year 50-year not available
0.005 0.005 0.	000   000		MOS (MMADD) without streamflow current 5-year 20-year 50-year

473 5.68 YES Minimum Adequate Margin of Safety

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Olmstead Water Supply Company - Newtown System

**Towns Served: Newtown** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Groundwater	0.0368	0.0368	302



Current Sysal Zuysal Society	Average Daily Demand (ADD), (MGD)			(MGD)	Maximum Monthly Average Dally Demand	Maximum Daily Demand (MDD), (MGD)			
0.024 0.029 0.032 0.032 0.032 0.039 0.039 not available	Current	5-year	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
	0.024	0.029	0,032	0.032	0.032 0.039 0.039	not available			

	MOS	frammers at	fthout streamflow
	Current	5-year	20-year   50-year
	1.23	1,15	0.94 0.94
Minimum Adequate Margin of Safety	YES	YES	NO NO

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Olmstead Water Supply Company - Possum Ridge System

Towns Served: New Fairfield

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Groundwater	0.0255	0.0255	320



Maximum Daily Demand (MDD), (MGD)

Average Daily Demand (ADD), (MGD)				Maximum Monthly Average	Maximum Daily Demand (MDD), (MGD)				
Current	5-year	20-year	50-year	Current 5-year	20-year 50-year	Current	5-year	20-year	50-year
0.028	0.027	0.027	0.027	0.034 0.039	0.039 0.039		not av	railable	
						別の	S (MMADD) v	rithout stream	flow
						Current	5-year	20-year	50-year
						district the comment	Commence Commence	**************************************	The second

Margin of Safety - The unitiess ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

Minimum Adequate Margin of Safety

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Portland Water Department

**Towns Served: Portland** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Ground Water	1.40	1.40	5010



Average Daily Demand (ADD), (MGD)		(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximum Daily Demand (MDD), (MGD)				
L	ENOR	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
Current	5-year	ZV-year	00- <u>y</u> cui	0.00	1 12	1.41	1.50	1.64
0.62	0.75	0.81	0.88	0.86 1.04 1.12 1.22	1.12	1,241	1,00	1.01

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1.63 1.35 1.25 1.15
Minimum Adequate Margin of Safety	YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.

\* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Preston Plains Water Company

**Towns Served: Preston** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population	
Groundwater	0.06	0.05	600	



	5.0.5	and (ADD), (f	MGD)	Maximum Monthly Average Daily Demand	Maximu	ım Daily Den	nand (MDD),	(MGD)
Avera	· <del>V</del>	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
Current	5-year	0.02	0.03	0.03	0.02	0.04	0.05	0.05
0.01	0.02	0.02	0.03	And the state of t				

	MOS (MMADD) without streamflow
	Gurrent 5-year 20-year 50-year
	2.50 = 1.67 = 1.67
	VEC
Minimum Adequate Margin of Safety	TEST SERVICES SERVICES SERVICES
Minimum Acedagic margination	

Margin of Safety - The unitless ratio of available water to demand.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

<sup>\*</sup> Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.

<sup>\*\*</sup> When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

Public Water System: Putnam Water Pollution Control Authority (WPCA)

Towns Served: Putnam, Thompson, Woodstock

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Ground water	1.38	1.37	7300



Ave	age Daily D	emand (ADD),	, (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily Der	nand (MDD)	), (MGD)
Current	5-vear	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
1.030	1,050	1,120	1,180	1.240 1.270 1.340 1.420	1.700	1.740	1.840	1.940

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1.10 1.08 1.02 0.96
Minimum Adequate Margin of Safety	NO NO NO NO

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Rural Water Company - Brook Acres Division

Towns Served: Brookfield

Source Water Type	Safe Yield,	Available Water, MGD	Population
Ground Water	0.0194	0.0194	212

Average Dally Demand (ADD), (MGD)



Maximum Daily Demand (MDD), (MGD)

YES

0.0105	5-year 0.0106	20-year 0.0112	50-year 0.0115	0.0134 0.0135 0.0143 0.0147		not available
		·				(MMADD) without streamflow
					Current	5-year 20-year 50-year

Maximum Monthly Average Dally Demand

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

Minimum Adequate Margin of Safety

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Rural Water Company - Brookfield Division

Towns Served: Brookfield

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	0.0967	0.0967	1,032



Avera	na Dally Dar	and (ADD)	(MGD)	Maximum Monthly Average Daily Demand	Maximu	m Daily Der	nand (MDD),	
	5-vear	20-vear		Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
Current	0.0592	0.0614		0.0704 0.0733 0.0748	0.0774		not available	
0.0586	0.0592	0.0014	O.COLOL					

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1.38 1.37 1.32 1.29
Minimum Adequate Margin of Safety	YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of supply for each calendar month by the number of days in that month and expressed in gallons per day.

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Rural Water Company - Cedar Heights Division

Towns Served: Brookfield

Source Water Type	Safe Yleid, MGD	Available Water, MGD	Population
Connod Water	0.0408	0.0408	496



Maximum Daily Demand (MDD), (MGD)

Avera	ge Daily De	mand (ADD),	(MGD)	Maximum Monthly Average Daily Demand	Maxim		20-year	50-year
Current	5-year	20-year	50 year	Current 5-year 20-year 50-year	0.0414	5-year	not available	00 700
0.0213	0.0205	0.0207	0.0207	0.025 0.0241 0.0243 0.0244	0.0414		7.00 210	
		<u> </u>			HAC	/MIANDO) W	ithout stream	flow
					Current	5 vear	20-year	50-year
					1.63	1.69	1 68	1.67

Maximum Monthly Average Daily Demand

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

Minimum Adequate Margin of Safety

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
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Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Rural Water Company - Craigmoor

Towns Served: Brookfield

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Gmund Water	0.0072	0.0072	68



Average Daily Demand (ADD), (MGD)	Maximum Monthly Average Dally Demand	Maxim	um Daily De	mand (MDD),	(MGD)
Current 5-year 20-year 50-year	Current         5-year         20-year         50-year           0.0028         0.0029         0.003         0.0031	Current 0,0087	5-уеаг	not available	50-year
0.0022 0.0022 0.0023 0.0024		HOC	ZARANDINI	rithout stream	oflow

Current 2.48 Minimum Adequate Margin of Safety YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Rural Water Company - Fieldstone

Towns Served: Brookfield

Source Water Type	Safe Yield,	Available Water, MGD	Population
Ground Water	0.022	0.022	136



Maximum Dally Demand (MDD), (MGD)

		CARDY (	HCD)	Maximum Monthly Average Daily Demand	Maximu	III Dally Del	ianu (mbb),	
Avera	ge Daily Der	nand (ADD), (	MGU)		Current	5-vear	20-year	50-year
Current	5-year	20-year	50.vear	Current         5-year         20-year         50-year           0.0081         0.0079         0.0082         0.0083	0,0087		not available	
0.0054	0.0054	0.0056	0.0058	SEC. 0.000   SEC. 0.000   SEC.   SEC. 0.000   SE				
				Ī	MOS (	MMADD) W	thout stream	flow
				Ì	Current	5-year	20-year	50 year.
					2.72	2.78	2.68	2.65
				Minimum Adequate Margin of Safety	YES	YES	YES	YES

Maximum Monthly Average Daily Demand

Margin of Safety - The unitless ratio of available water to demand.

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Rural Water Company - Ken Oaks Division

Towns Served: Brookfield

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	0.0972	0.0972	204



Maximum Daily Demand (MDD), (MGD)

				Maximum Monthly Average Daily Demand	Maximu	im Daily Demand (MDD), (MGD)
Avera	ige Daily Den	nand (ADD), (	MGD)	Current 5-year 20-year 50-year		5-year 20-year 50-year
Current	5-year	20-year	50-year	0.015 0.015 0.0152 0.0152	0.0171	not available
0.0092	0.0121	0.0122	0.0123			
					MOS	(MMADD) without streamflow
					Collegant	5-year 20-year 50-year
					6.48	6.48 6.39 6.39
					Carpanyan	YES YES YES
				Minimum Adequate Margin of Safety	YES	

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
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- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accomodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year.

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of supply for each calendar month by the number of days in that month and expressed in gallons per day.

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Rural Water Company - Oakwood

Towns Served: New Fairfield

Source Water Type	Safe Yield,	Available Water, MGD	Population
many a second or produce and plants may be seen as a second of the secon			408
Ground Water	0.0408	0.0408	408



Committee of the commit	Maximum Daily Demand (MDD), (MGD)	1
Average Dally Demand (ADD), (MGD)	Maximum monthly Average 50-year 50-year 50-year	١
Current 5-year 20-year 50-year	Current 5-year 20-year 50-year Current not available	1
0.0249 0.0249 0.0251 0.0252	0.0291 0.0291 0.0293 0.0294 0.0297 Hot available	•
<u> </u>	and the second of the second o	1

	MOS (MMADD) without streamflow
	HOCIMALITY WINDULSUGATION
	INCO (IIII CO.)
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Minimum Adonuate Margill Of Odlety	Control of the Contro
Minimum Adequate Margin of Safety	N
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Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accomodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year.

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of supply for each calendar month by the number of days in that month and expressed in gallons per day.

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Rural Water Company - Pearce Manor

Towns Served: Brookfield

Source Water Type	Safe Yleid, MGD	Available Water, MGD	Population
Ground Water	0.0354	0.0354	200



Current         5-year         20-year         50-year         Current         5-year         20-year         Current         5-year         20-year         50-year         Current         5-year         20-year         50-year         Current         5-year         20-year         not available	Avera	ge Daily De	mand (ADD),	(MGD)	Maximum Monthly Average Daily Demand	Maxim	um Daily De	mand (MDD)	
					Current 5-year 20-year 50-year		5-year	20-year	50-year
		0.0073	0.0075	0.0076	0.0087 0.0088 0.009 0.0091	0.015		not available	

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	4.07 4.02 3.93 3.89
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- · Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely
  over an extended time period to accomodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- · Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year.

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of supply for each calendar month by the number of days in that month and expressed in gallons per day.

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Rural Water Company - Ridgefield Lakes #1 Division

Towns Served: Brookfield

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	0.0029	0.0029	40



Maximum Daily Demand (MDD) (MCD)

Average Daily Demand (ADD), (MGD)			rigu}	maximum multilly Average Daily Demaild	INDVIB	Bill Daily De	mana (moo),	(11100)
Current	5-year	20-year	50-year	Gurrent 6-year 20-year 50-year	Current	5-year	20-year	50-year
0.0011	0.0011	0.0013	0.0015	0.0016 0.0017 0.002 0.0022	0.0033		not available	
	HANDY HAVE							

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	15 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year.

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of supply for each calendar month by the number of days in that month and expressed in gallons per day.

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Rural Water Company - Ridgefield Lakes #2 Division

#### Towns Served:

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	0.0049	0.0049	60



Maximum Daily Demand (MDD), (MGD)

Current 5-year 20-year 50-year	Maximum Monthly Average Daily Demand     Maximum Daily Demand (MDD), (MGD)       Gurrent     5-year     20-year     50-year     Current     5-year     20-year     50-year       0.0032     0.0032     0.0034     0.0035     0.0033     not available
0.0023 0.0023 0.0024 0.0025	MOS (MMADD) without streamflow  Current 5-year 20-year 60-year
	1.53   1.53   1.44   1.40

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for
- extended time periods without incurring long term deliterous effects to the supply. Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely
- over an extended time period to accomodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year.

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of supply for each calendar month by the number of days in that month and expressed in gallons per day.

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Rural Water Company - Ridgefield Lakes #4 Division

Towns Served: Brookfield

Source Water Type	Safe Yleld,	Available Water, MGD	Population
Ground Water	0.0058	0.0058	25



	B. It. Des	TOTAL CARDON	(MGD)	Maximum Monthly Aver	rage Daily Demand	Maxim	ım Da <u>ily De</u> :	mand (MDD),	
Avera			50-vear			Current	5-year	20-year	50-year
Current	5-year	20-year			0.0003 0.0004	0.0009	-	not available	
0.0002	0.0002	0.0002	0.0002	and the particular of the part					

Ī	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	2.00 19.33 14.50
Minimum Adequate Margin of Safety	YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accomodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year.

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of supply for each calendar month by the number of days in that month and expressed in gallons per day.

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Rural Water Company - Ridgefield Lakes #9&9A Division

Towns Served: Brookfield

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	0.0058	0,0058	40



Average Daily Demand (ADD), (MGD) Maximum Monthly Ave			Maximum Monthly Average Daily Demand	Maxim	um Daily De	mand (MDD)	(MGD)	
Current	5-year	20-year	50-year	Current 5-year 20-year 50-year	Current	5-уеаг	20-year	50-year
0.0023	0.0023	0.0024	0.0024	0.0026 0.0026 0.0027 0.0028	0.0045	<u> </u>	not available	

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	2.23 2.23 2.15 2.07
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gailons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accomodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year.

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of supply for each calendar month by the number of days in that month and expressed in gallons per day.

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Rural Water Company - Ridgefield Lakes #11 Division

Towns Served: Brookfield

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	0,0058	0.0058	40



Average Daily Demand (ADD), (MGD)				Maximum Monthly Average Dally Demand	Maxim	ım Daily De	mand (MDD)	, (MGD)
Current	5-уеаг	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
0.0013	0.0014	0.0015	0.0016	0.002 0.002 0.0022 0.0023	0.002	not available		,
						24425 A 75 MV	J.1	

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	2.90 2.90 2.64 2.52
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accomodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

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- Large amounts of storage are not available in a groundwater source or small reservoir.
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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of supply for each calendar month by the number of days in that month and expressed in gallons per day.

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Rural Water Company - Ridgefield Lakes Main Division

Towns Served: Brookfield

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	0,0399	0.0399	750



Average Daily Demand (ADD), (MGD)				Maximum Monthly Average Daily Demand	Maximu	m Daily De	mand (MDD)	, (MGD)
Current	5-year	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
0.02	0.02	0.02	0.02	0.02 0.03 0.03	0.04	not available		)

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	2.00 1.33 1.33 1.33
Minimum Adequate Margin of Safety	YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
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  over an extended time period to accommodate high demand periods.
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Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

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- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of supply for each calendar month by the number of days in that month and expressed in gallons per day.

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Rural Water Company - Scodon

Towns Served: Brookfield

Source Water Type	Safe Yield,	Avallable Water, MGD	Population
Ground Water	0.0436	0.0436	152



			-1001	Maximum Monthly Average Daily Demand	Ma)	imum Daily De	emand (MDD), (N	IGU)
Avera	ge Dally Den	nand (ADD), (	MGD)	maniful and the same of the sa	Curren	t 5-vear	20-year	50-year
Current	5-vear	20-year	50-year	Current 5-year 20-year 50-year	0.0234		not available	
0.0156	0.0156	0.0157	0.0158	0.017 0.0164 0.0165 0.016	0,0234		Hot aranabie	
0.0136	0.0100	0,0101						
						OC BERTADOL	dibout etroamil	OW

!	MOS (MMADD) without streamflow
	Current   Super   20.vear   50-vear
	2.56 2.66 2.64 2.64
	VEC VEC VEC VES
Minimum Adequate Margin of Safety	

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

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  - extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
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- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Rural Water Company - Soundview

Towns Served: Brookfield

Source Water Type	Safe Yield,	Available Water, MGD	Population
Ground Water	0.1118	0.1118	68



Current 5-year 20-year 50-year	Current 5-year 20-year 50-year	Maximum Daily Demand (MDD), (MGD)  Current 5-year 20-year 50-year  0,0108 not available
0.007 0.007 0.0071 0.0072	3,30002	MOS (MMADD) without streamflow

55 Mari	The second secon
	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
Minimum Adequate Margin of Safety	YES YES YES
Millimum Adeddate margin or garage	

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of supply for each calendar month by the number of days in that month and expressed in gallons per day.

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Salmon Brook District

**Towns Served: Granby** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	0.27	0.27	2151



Aver	Average Daily Demand (ADD), (MGD)			Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily Der	nand (MDD)	
Current	5-vear	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
0.16	0.16	0,16	0.17	0.22 0.22 0.23	0.24	0,24	0.24	0.25

MOS (MMADD) without streamflow
Current 5-year 20-year 50-year
1.23 1.22 1.21 1.18 YES YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

**Public Water System: Southbury Training School** 

**Towns Served: Southbury** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	0.53	0.5	2328



Average Daily Demand (ADD), (MGD)				Maximum Monthly Average (MMADD), (MG		Maximu	m Daily Der	nand (MDD),	(MGD)
Current	5-year	20-year	50-year	Current 5-year 20-	year 50-year	Current	5-year	20-year	50-year 0.27
0.18	0.18	0.18	0.18	0.26 0.26 0.	26 0.26	0.27	0.27	0,27	0.27
					Į.	MOS	(MMADD) w	ithout stream	flow

	MOS (MMADD) without streamflow	ı
	Current 5-year 20-year 50-year	1
	1.92 1.92 1.92	1
Minimum Adequate Margin of Safety	YES YES YES YES	1

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: South Central CT Regional Water Authority

Towns Served: Ansonia, Bethany, Branford, Cheshire, East Haven, Hamden, Milford, New Haven, North Branford, North Haven, Orange, West Haven, Woodbridge and portions of Derby and Seymour

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Ground Water	81.20	76.70	437955



Average Daily Demand (ADD), (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)			Maximum Daily Demand (MDD), (MGD)				
Current 5-year 20-year 50-year	Current	5-year	20-year	50-year	Current	5-year	20-year	50-year
50.900 55.000 56.600 62.600	59.400	65.600	71.400	87,700	74.500	82.200	89.400	109,600

	MOS (ADD) without streamflow
	Current 5-year 20-year 50-year
	1.39 1.36 1.28
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Sprague Water & Sewer

Towns Served: Sprague

	Safe Yield,	Available	Population
Source Water Type	MGD	Water, MGD	
Groundwater	0.13	0.13	1652
Ciounanaio			



ODDINATION (MCD)	Maximum Daily Demand (MDD), (MGD)		
Average Daily Demand (ADD), (MGD)  Current 5-year 20-year 50-year	(MMADD), (MGD)  Current 5-year 20-year 50-year 20-year	Current         5-year         20-year         50-year           0.11         0.13         0.14         0.18	r
0.07 0.07 0.08 0.1	0.08   0.09   0.1   0.13	NOC (MMADD) without streamflow	

and the second s	
1	MOS (MMADD) without streamflow
	Gurrent 5-year 20-year 50-year
	163 1244 130 1.00
	YES YES YES NO
Minimum Adequate Margin of Safety	Principal B 40 minutes and the second

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
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Public Water System: SCWA - Barrett Division

Towns Served: Ledyard

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground water	0.05	0.04	300



Ave	Average Daily Demand (ADD), (MGD)			Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximum Daily Demand (MDD), (MGD)			
0	F.,,,,,,	20-year	50-vear	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
Current	5-year			0.00	0.02	0.02	0.02	0.02
0.01	0.01	0.01	0.01					

•	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	2.24 2.03 2.03 2.03
Minimum Adequate Margin of Safety	YES YES YES YES
Millimin Anerlagie marani arasanan	A. C.

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Public Water System: SCWA - Birchwood Division

**Towns Served: Montville** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground water	0.02	0,02	108



Average Daily Demand (ADD), (MGD)			(MGD)	Maximum Monthly Average Daily Demand Maximum Daily Demand (MMADD), (MGD)			nand (MDD)	nd (MDD), (MGD)	
Current	5-vear	20-vear	50-vear	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year	
0.00	0,01	0.01	0,01	0.00 0.01 0.01 0.01	0.01	0.01	0.01	0.01	

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	4.62 2.78 2.78 2.78
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

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Public Water System: SCWA - Cedar Ridge Division

**Towns Served: North Stonington** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground water	unknown; DPF	0.04	358



Average Daily Demand (ADD), (MGD)			(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily Dei	mand (MDD)	, (MGD)
Current	5-year 0.034	20-year 0.034		Current         5-year         20-year         50-year           0.051         0.067         0.067         0.067	Current 0.057	<b>5-year</b> 0.074	<b>20-year</b> 0.074	<b>50-year</b> 0,074
0.026	0.034	0.034	0.004					

	MOS (MMADD) without streamflow
·	Current 5-year 20-year 50-year
	0.74 0.56 0.56 0.56
Minimum Adequate Margin of Safety	NO NO NO NO
Hilling Harden Control of the Control	20 000000000000000000000000000000000000

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: SCWA - Chesterfield Division

**Towns Served: Montville** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population	
Ground water	0.14	0.04	524	



Avor	ago Daily D	emand (ADD),	(MGD)	Maximun	Monthly Av	rerage Daily C	Demand	Maximu	n Daily Den	nand (MDD)	, (MGD)
Current	5-vear	20-year	50-year	Current	5-year		50-year	Current 0.04	5-year 0.07	20-year 0.07	50-year 0,07
0.02	0.03	0.03	0.03	0.04	0.05	0.05	U.Uə	0.04	0.01	0.01	

	MOS (MMADD) without streamflow
	II/C/Maaanni witham st(eamnow - 1
	III OO JIIIII OO JIII
	The state of the s
	Current 5-year 20-year 50-year
	0.97 0.83 0.83 0.83
	A A A THE ROOM IN A ROOM IN A STATE OF THE RO
	NO NO NO NO
Tatter and Adamsto Regrand Of SQIPIV	
Minimum Adequate Margin of Safety	Control of the Contro

Margin of Safety - The unitless ratio of available water to demand.

\* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.

\*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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- extended time periods without incurring long term deliterous effects to the supply. Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accomodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.

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Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: SCWA - Chriswood Division

Towns Served: Ledyard

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground water	0.02	0.02	164



Average Daily Demand (ADD), (MGD)  Maximum Month (MM)				Maximum Monthly Average Dally Demand (MMADD), (MGD)				
Current	5-vear	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
Current			0.01	0.02 0.02 0.02	0.02	0.03	0.03	0.03
0.01	0.01	0.01	0,01	And the state of t			<u></u>	

•	
	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1.47 1.08 1.08 1.08
	YES NO NO NO
Millifulli Adequate malgin vi valvo	

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: SCWA - Gray Farms Division

Towns Served: Ledyard

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground water	0.07	0,05	460

Average Daily Demand (ADD), (MGD)



of Public Health						
um Daily Demand (MDD), (MGD)						
5-ve	ar	20-year	50-year_			

Maxim

Aveid	ige Daily D	Omana ( 71			20-year	50-year	Current	5-year	20-year	50-year
Current	5-year	20-year	50-year	Current 5-year 0.035 0.036		0.036	0.057	0.054	0.054	0.054
0.027	0.026	0.026	0,026	0.036	1 0.000	-				
							MOS (	MMADD) w	ithout strea	mflow
							Current	5-year	20-year	50-year
							1.42	1.40	1.40	
				Minimum Adequate Ma	rain of Safe	tv =====	YES	YES	YES	YES
				Militari Adoques	•					

Maximum Monthly Average Daily Demand

(MMADD), (MGD)

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: SCWA - Hillcrest Division

Towns Served: Montville

	Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Connection 1 (1.20) 1 (1.14 1 099	Company of the Compan	0.20	0.14	699



Avera	age Daily De	emand (ADD),	(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily Der	nand (MDD)	, (MGD)
Current	5-year	20-year		Current 5-year 20-year 50-year	Current 0.04	5-year 0.12	20-year 0.12	50-year 0.12
0.02	0.04	0.04	0.04	0.03 0.08 0.08 0.08	0.04			

•	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	4.64 4.89 1.89
Minimum Adequate Margin of Safety	YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accomodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: SCWA - Lantern Hill Division

**Towns Served: Stonington** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground water	0.02	0.02	92



Aver	age Daily De	mand (ADD),	(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily Dei	nand (MDD)	), (MGD)
Current	5-уеаг	20-vear	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
0.004	0.004	0.004	0.004	0.005 0.005 0.005 0.005	0.007	0.010	0.010	0.010

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	3.03 3.15 3.15 3.15
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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  over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: SCWA - Ledyard Division

Towns Served: Ledyard

Source Water Type	Safe Yield,	Available Water, MGD	Population
	0.04	0.04	196



Giodio Nater			
Average Daily Demand (ADD), (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximum Daily	Demand (MDD), (MGD)
Average bany bemana (		Current 5-ye	ar 20-year 50-year
Cullent   0-year   /	Gurrent 5-year 20-year 50-year 0.004 0.013 0.031 0.031	0,006 0.01	9 0.045 0.045
0.004 0.009 0.020 0.020	0.004 0.013 0.031 0.031		

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	0.00
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: SCWA - Mohegan Division

**Towns Served: Montville** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population	
Ground water	0.17	0.17	1428	



Average Daily Demand (ADD), (MGD)		(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximum Dally Demand (MDD), (MGD)			
Current         5-year           0.07         0.08	<b>20-year</b> 0.08		Current   5-year   20-year   50-year   0.09   0.11   0.11   0.11	Current 0.10	<b>5-year</b> 0.13	20-year 0.14	50-year 0.14

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	200
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: SCWA - Montville Division

**Towns Served: Montville** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground water	0.15	0.16	2174



Connecticut Department of Public Health

Aver	age Daily De	mand (ADD),	(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily Der	nand (MDD)	), (MGD)
<u> </u>		20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
Current	5-year	20-year		0.20 0.20 0.20	0.14	0.31	0.36	0.36
1 0.11	0.19	0.21	0.21	0.10				

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1.22 0.60 0.53 0.53
Minimum Adequate Margin of Safety	YES NO NO NO

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.

\* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: SCWA - North Stonington Division

Towns Served: North Stonington

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground water	0.37	0,12	1860



Aver	age Daily D	emand (ADD),	(MGD)	Maximum Month	iy Average Dally D ADD), (MGD)	emand	Maximu	m Daily Der	nand (MDD)	, (MGD)
Current	5-year	20-year	50-year	Current 5-ye		50-year	Current 0,239	<b>5-year</b> 0.105	20-year 0.105	50-year_ 0.105
0.047	0.055	0.055	0.055	0.070 0.07	/ UV/	1.01-E	0.200	0,100		

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1/70 (53 1.53 1.53
Minimum Adequate Margin of Safety	YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accomodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
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Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: SCWA - Robin Hill Division

**Towns Served: Montville** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground water	0.05	0.05	388



Productive and the second seco	Maximum Monthly Average Daily Demand	Maximum Daily Der	nand (MDD), (MGD)
Average Daily Demand (ADD), (MGD)  Current 5-year 20-year 50-year	(MMADD); (MGD)	Current 5-year 0.05 0.08	20-year 50-year 0.36 0.36
0.02 0.02 0.21 0.21	0.04 0.05 0.29 0.29	0.00	

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	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1.31 1.03 0.17 0.17
	YES NO NO NO
Minimum Adequate Margin of Safety	The state of the s

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million galions per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

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Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: SCWA - Tower/Ferry View Heights Division

Towns Served: Ledyard

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground water	0.57	0.73	2567



Connecticut Department of Public Health

David (ADD) (MGD)	Maximum Monthly Average Daily Demand	Maximum Daily Demand (MDD), (MGD)
Average Daily Demand (ADD), (MGD)           Current         5-year         20-year         50-year           0.17         0.20         0.20         0.20	(MMADD), (MGD)   Current   5-year   20-year   50-year     0,21   0.26   0.26   0.27	Current         5-year         20-year         50-year           0.27         0.34         0.34         0.35

	MOS (MMADD) without streamflow
	Current         5-year         20-year         50-year           3.53         2.82         2.79         2.76
Minimum Adequate Margin of Safety	YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: So. Norwalk Electric & Water (Second Taxing District of Norwalk)

Towns Served: Norwalk, small portion of Wilton

Source Water Type		Available Water, MGD	Population
Surface Water	5.50	5.50	42000



Connecticut Department of Public Health

	Maximum Monthly Average Daily Demand	Maximum Daily Demand (MDD), (MGD)
Average Daily Demand (ADD), (MGD)	(MMADD), (MGD)	Current 5-year 20-year 50-year
Gurrent 5-year 20-year 50-year	Current 3-year 1 20 year C 470	7.820 7.820 7.620 8.080
4.910 4.910 4.790 5.100	6.280 0.200 0.100	

0.200		
		MOS (MMADD) without streamflow
		Current 5-year 20-year 50-year
		147 (12 1 1 1 b 1 1 Ve
Berchanton An	lequate Margin of Safety	NO NO YES NO
HVHHHHHHUHH MV	Ignary marking and an and an	· · · · · · · · · · · · · · · · · · ·

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Average day demands are reasonable to consider for this type of system due to the following:

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- Treatment plant capacities are generally higher than approved safe yield capacities.
  - Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accomodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

**Public Water System: Southington Water Department** 

Towns Served: Southington (ESA includes Cheshire)

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Ground Water	8.63	7.26	40408



Aver	age Daily D	emand (ADD),	(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximu	m Daily Dei	mand (MDD)	
Current	5-vear	20-vear	50-vear	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
Current	422	4.61		5.62 6.07 6.64 7.62	7.77	8.06	8.81	10.11
3.90	4,22	4,01	0.20					

	MOS (	MMADD) without streamflow
	Current	5-year 20-year 50-year
		119 109 0.95
Minimum Adequate Margin of Safety	YES	YES NO NO

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely
  over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.

\* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Tolland Water Department

Towns Served: Tolland

Source Water Type	Safe Yield,	Available Water, MGD	Population
	0.48	0.22	1251
Groundwater	0,40		



Giornamaio		
	Maximum Monthly Average Daily Demand	Maximum Daily Demand (MDD), (MGD)
Average Daily Demand (ADD), (MGD)	(MMADD); (MGD)	Current 5-year 20-year 50-year
Current 5-year 20-year 50-year	Current 5-year 20-year 50-year 0.17 0.27 0.31 0.42	0.3 0.41 0.48 0.65
0.14 0.21 0.24 0.33		
		MOS (MMADD) without streamflow

Washington and the second seco	The second secon
	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	129 0.81 0.71 0.52
Minimum Adequate Margin of Safety	YES NO NO NO
Willimmin Anedrate marging a series	

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
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- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

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Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

**Public Water System: Torrington Water Company** 

Towns Served: Torrington, Burlington, Harwinton, very small corner of New Hartford

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface Water	5.32	5.32	41454



Average Daily Demand (ADD), (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)				nand (MDD)	), (MGD)		
Current 5-year 20-year 50-year	Current	5-year	20-year	50-year	Current	5-year	20-year	50-year
3,350 3,540 4,380 4,620		4.050	5.000	5.280	4.920	5.200	6.430	6.790

	MOS (ADD) without streamflow
	Current 5-year 20-year 50-year
	1.59 1.50 1.21 1.15
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitiess ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Topstone Hydraulics - Ridgefield Knolls System

Towns Served: Ridgefield

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Groundwater	0.1	0.1	967



Ave	erage Daily I	Demand (ADD)	), (MGD)	(MMADD), (MGD)	Maximum Daily Demand (Mi		Maximum Daily Demand (MDD), (MGD)	
Current	5-year	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
0.054	0.044	0.043	0.042	0.066 0.046 0.045 0.044	0.074	0.05	0.05	0.05

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1.52 2.17 2.22 2.27
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: United Water (formerly Bethel Consolidated - Chimney Heights)

**Towns Served: Bethel** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population	
Ground Water	0.22	0.22	2,227	



Average Daily Demand (ADD), (MGD)		Maximum Mon	ithly Average Dall IMADD), (MGD)	y Demand	Maxim	um Dally De	mand (MDD),	(MGD)	
Current 5-year	<b>20-year</b> 0.16	50-year 0.18	Current 5-y			Current 0.18	5-year 0.23	<b>20-year</b> 0,25	<b>50-year</b> 0,29
0.11 0.14	0.10		- Victoria V				THE PARTY OF THE P		- G S W

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1.38 1.10 1.00 0.88
Minimum Adequate Margin of Safety	YES NO NO NO
T. S. T.	•

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accomodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of supply for each calendar month by the number of days in that month and expressed in gallons per day.

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: United Water - Indian Ridge Division

**Towns Served: New Milford** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population	
Ground Water	0.108	0.108	288	



Ave	rage Daily I	Demand (ADD	), (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Parties . Parties of . Parties			
10	F >	20-vear	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
Current	5-year		0.011	0.014 0.013 0.013 0.013	0.02	0.019	0.019	0.019
0.01	0.011	0.011	0.011				<u> </u>	· · · · · · · · · · · · · · · · · · ·

1	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	7-7/1 8-31 8-31 8-31
Minimum Adequate Margin of Safety	YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: United Water - Meadowbrook Division

Towns Served: New Milford

Source Water Type Ground Water	Safe Yield, MGD 0.035	Available Water, MGD 0.035	Population 404	
			Maximun	Monthly Average Dally Demand



NO

				Maximum Monthly Average Dally Demand Maximum Daily Demand (MD			nand (MDD),	(MGD)
Ave	rage Daily I	Demand (ADD)	, (MGD)	(MMADD), (MGD)	Current	5-year	20-year	50-year
Current	5-year	20-year	50-year	Current         5-year         20-year         50-year           0.039         0.035         0.035         0.035		0.054	0.054	0.054
0.032	0.03	0.03	0.03	The Court of the C				
					MOS	(MMADD) w	ithout stream	50-year
					Current 0.90		20-year 1.00	1 00
					0.90	NO.	NO	

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

Minimum Adequate Margin of Safety

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: United Water - Newtown Division

Towns Served: New Milford, Brookfield, Bethel

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population	
Ground Water	1.177	1.177	40	



Ave	rage Daily I	Demand (ADD)	), (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maxim	um Daily De	mand (MDD),	
Course	Event	20-year	50-vear	Current 5-year 20-year 50-year	Current	5-уеаг	20-year	50-year
Current	5-year			0.699 0.713 0.798 0.923	0.856	0,954	1.068	1,235
0.557	0.561	0.628	0.727		0.000			

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1.68 1.65 1.47 1.28
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: United Water - Pleasant View Division

**Towns Served: New Milford** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population	
Ground Water	0.023	0.023	206	
		, (HOD)	Maximun	i Monthly Average Dally Deman



Maximum Daily Demand (MDD), (MGD)

	Dallie I	Demand (ADD)	(MGD)		Maximi	ım Daliy Dei	nana (mbb),	(mob)
Ave	rage Daily L	Jemana (ADD)	,, (.ii.o.o.)	(MMADD), (MGD)	Current	5-year	20-year	50-year
Current	5-year	20-year	50-year	Current         5-year         20-year         50-year           0.022         0.023         0.023         0.023	0.029	0.035	0.035	0.035
0.02	0.02	0.02	0.02					
				Ī	MOS	(MMADD) w	ithout strear	nflow
							20-year	
				L. L	1.05	1:00	1.00	1:00
				<u></u>	Andrew Control of the		programme in the same and a second	A CONTRACTOR OF THE PARTY OF TH

NO Minimum Adequate Margin of Safety

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: United Water - Twin Oaks Division

Towns Served: New Milford

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Groundwater	0.019	0.019	150



Averag	e Daily Dem	and (ADD).	(MGD)	Maximum Monthly Average Dally Demand	Maxim	um Daily Dei	mand (MDD),	(MGD)
Current	5-year	20-vear	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
0.009	0.008	0.008	0.008	0.01 0.009 0.009 0.009	0.015	0.013	0.013	0.013
0,000	0,000			Manager Control of the Control of th				

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	190 2.11 2.11 2.11
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: United Water Woodbury

**Towns Served: Woodbury** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Groundwater	0.281	0.281	1642



·								
Average Daily De	mand (ADD)	, (MGD)	Maximum Monthly Average Daily Dem (MMADD); (MGD)	and	Maximu	m Daily Der	nand (MDD),	, (MGD)
		,		-vear	Current	5-year	20-year	50-year
Current 5-year	20-year	50-year	CHIEF CONTROL OF THE PARTY OF T	221	0.278	0.289	0.294	0.33
n 174   0.181	0.184	0.206	U. (1) U.	7				

<del> </del>	
	MOS (MMADD) without streamflow
	50 year 50 year
	A Supplied to the supplied to
Minimum Adequate Margin of Safety	YES YES YES
MINIMUM Aned rate margin or concide	

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: University of Connecticut

**Towns Served: Storrs** 

Groundwater 1.458 1.458 13027	Source Water Type	Safe Yield,	Available Water, MGD	Population
	Groundwater	1.458	1.458	13027



Groundwater 1.458 1.458	Maximum Monthly Average Daily Demand	Maximum Daily Demand (MDD), (MGD)
Average Daily Demand (ADD), (MGD)	(MMADD), (MGD)	Current 5-year 20-year 50-year
Current 5-year 20-year 50-year	Current         5-year         20-year         50-year           1.53         2.22         2.32         2.32	2.19         3.31         3.48         3.48
1.29 1.7 1.79 1.79	South the street of the street	MOS (MMADD) without streamflow

156	
	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	0.95 0.66 0.63 0.63
_	0.95 0.66 0.63 U.63
Minimum Adequate Margin of Safety	NO NO NO
Minimum Adequate warging of our y	

Margin of Safety - The unitless ratio of available water to demand.

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- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Valley Water Systems (formerly Plainville Water Co)

Towns Served: Plainville, Southington, Farmington

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	2.94	2.94	17078



Average Daily Demand (ADD), (MGD)			(ADD), (MGD)  Maximum Monthly Average Daily Demand (MMADD), (MGD)			Maximum Daily Demand (MDD), (MGD)			
Current	5-year	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year	
1.80	2.01	2.09	2.25	2.23 2.91 3.02 3.26	2.85	3.70	3.84	4.13	

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1.32 1.01 0.97 0.90
Minimum Adequate Margin of Safety	YES NO NO NO NO

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accomodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
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Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Wallingford Water Division

Towns Served: Wallingford and 15 residents of Cheshire

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface/Ground Water	9.08	9.00	2875



Average Daily Demand (ADD); (MGD)	Maximum	Monthly Av		Demand	Maximui	n Daily Der		
Current 5-year 20-year 50-year	Current	5-year	20-year	50-year	Current 7.61	5-year 7.65	<b>20-year</b> 8,06	50-year 8.63
4.97 5.01 5.28 5.65	6.24	6.29	6.62	7.09	7.01	7.00	0.00	

	MOS (ADD) without streamflow
	Current 5-year 20-year 50-year
	1.81 80 1.71 1.59
	YES YES YES
Minimum Adequate Margin of Safety	The state of the s

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

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Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Waterbury Bureau of Water

**Towns Served: Waterbury** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface Water	27.00	27.00	107271



Average Dally Demand (ADD), (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)			ma Dally Domand (ADD): IMCD): Maximi			Maximu	m Daily Dei	nand (MDD	), (MGD)
Current 5-year 20-year 50-year	Current	5-year	20-year	50-year	Current	5-year	20-year	50-year		
15.580 16.600 16.700 17.500	20.100	21.600	21.700	22.800	20.400	24,900	25,100	26.300		

	MOS (ADD) without streamflow
	Gurrent 5-year 20-year 50-year
	1.62 1.54
Minimum Adequate Margin of Safety	YES YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Waterford WPCA

Towns Served: Waterford

5-year

Current

1.76

Source Water Type Safe Yield, MGD  Consecutive System not applicable	Water, MGD	Population 26,273			
Average Daily Demand (ADD)	, (MGD)	0	Monthly Av 5-year	verage Daily 20-year	Demand 50-year

20-year

2.14

50-year

2.54



Maximum Daily Demand (MDD),

	Maximum	Monthly A	verage Dany	FOWOOF	Current	5-vear	20-year	50-year
	Current	5-year	20-year	50-year	2.86	3.12	3.49	4.14
ı	2.34	2.55	2.85	3.38	2.00	<u> </u>	<u> </u>	
<u>: 1</u>							W	mflow
					MOS	w (DDAMM)	Wiloficanea	50-year
					Current	5-year		DU-year
					1.08	1.05	1.01	0.90
						NO	NO	- NO
Ī	Minimum /	dequate N	largin of Sa	afety	NO =	The second secon	and the second second second	
	111111111111111111111111111111111111111	Actual Design Committee						

Margin of Safety - The unitless ratio of available water to demand. \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.

\*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year.

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of supply for each calendar month by the number of days in that month and expressed in gallons per day.

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Watertown Fire Dist.

Towns Served: Watertown

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Ground Water	1.35	1.35	6718



Average Daily Demand (ADD), (MGD)		), (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximum Daily Demand (MDD), (MGD)				
Current	5-vear	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-уеаг
0.55	0.61	0.62	0.66	0.76 0.92 0.93 0.99	1.12	1.27	1.28	1.37

MOS (MMADD) without streamflow	Samuel Service Service Co.
Current 5-year 20-year 50-	year
1.78 [47]	36
Minimum Adequate Margin of Safety YES YES YES YES	ES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.

\* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Watertown Water & Sewer

Towns Served: Watertown

Source Water Type	Safe Yield,	Available	Population		
Source Water: 17pe	MGD	Water, MGD	Fopulation		
Consecutive System	not applicable	3	10,572		



Average Daily Demand (ADD), (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)			Maximim Daliv Demand				nd (MDD), (MGD)	
Current 5-year 20-year 50-year	Current	5-year	20-year	50-year	Current	5-year	20-year	50-year	
1.05 1.16 1.32 1.81	1.55	1.72	1.96	2.68	2.94	3.26	3.72	5.09	

	MOS (MMADD) without streamflow  Current 5-year 20-year 50-year
	2.86 2.59 2.27 1.66
Minimum Adequate Margin of Safety	YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Windham Water Works

Towns Served: Windham, Mansfield

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface Water	7.90	4.10	20193



Average Daily Demand (ADD), (MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)			Maximum Daily Demand (MDD), (MGD)				
Current 5-year 20-year 50-year	Current	5-year	20-уеаг	50-year	Current	5-year	20-year	50-year
2.330 2.170 2.420 2.570		2.470	2.750	2.930	3.970	3.380	3.770	4.010

	MOS (ADD) without streamflow
	Current 5-year 20-year 50-year
	1.76 1.89 1.69 1.60
Minimum Adequate Margin of Safety	YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

**Public Water System: Winsted Water Department** 

**Towns Served: Winchester** 

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Surface Water	2.98	2.98	7784



Avei	Average Daily Demand (ADD), (MGD)  Maximum Monthly Average Daily Demand (MMADD), (MGD)		Maximu	m Daily Der	nand (MDD)	), (MGD)		
Current	5-vear	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
0.960	1.350	1.550	1.890	1.060 1.510 1.740 2.120	1.210	1.780	2.050	2.490

	MOS (	MMADD) w	ithout strea	mflow
			20-year	
			1.71	
Minimum Adequate Margin of Safety	YES	YES	YES	YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

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Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

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Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Woodlake Tax Dist.

Average Daily Demand (ADD), (MGD)

Towns Served: Woodbury

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Groundwater	0.13	0.13	912



Maximum Daily Demand (MDD), (MGD)

Current	5-year	20-year	50-year			Current	5-year	20-year	50-year
0.06	0.06	0.06	0.06	0.08	0.07	80.0	0.08	80.0	0.08
						<b>MOS</b>	(MMADD) v	vithout strea	mflow
						Current	5-vear-	20-year	50-year

Maximum Monthly Average Dally Demand

(MMADD), (MGD)

	MOS (MMADD) without streamflow
	Current 5-year 20-year 50-year
	1.63 1.63 1.86 1.86
Minimum Adequate Margin of Safety	YES YES YES

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely over an extended time period to accommodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
- \* DPH will be proposing legislation to legally define minimum quantative numerical values for margin of safety to ensure consistency across the water industry and to protect the health, safety, and economic interests and well being of the State of Connecticut.

Available Water - The maximum amount of water a company can dependably supply, taking into account the following limitations applied to safe yield: limitations imposed by hydraulics, treatment, pump capabilities, permit conditions, approval limitations, legal restrictions, maximum contractual legal agreements to supply water, Sale of Excess Water (SEW) permits to neighboring utilities, etc.

Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources of

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.

Public Water System: Worthington Fire Department

Towns Served: Berlin

Source Water Type	Safe Yield, MGD	Available Water, MGD	Population
Purchase from Berlin		0.69	37267



Average Daily Demand (ADD), (MGD)		(MGD)	Maximum Monthly Average Daily Demand (MMADD), (MGD)	Maximum Daily Demand (MDD), (MGD)				
Current	5-year	20-year	50-year	Current 5-year 20-year 50-year	Current	5-year	20-year	50-year
0.27	0.30	0.36	0.37	0.42 0.40 0.47 0.48	N/A	0.46	0.54	0.56

1	MOS (MMADD) without streamflow				
	Current	5-year	20-year 50-year		
	1.62	4.73	1.46 1.42		
Minimum Adequate Margin of Safety	YES =	YES	YES		

Margin of Safety - The unitless ratio of available water to demand.

- \* Minimum recommended margin of safety for this system is 15% based on the maximum month average daily demand.
- \*\* When available, projected margin of safety with streamflow is based upon projections provided by the public water system in question.

The margin of safety must be sufficient to meet the water company's current and future needs considering factors such as potential increases or decreases in demand, the time required to bring new sources of supply on line, potential losses of sources of supply or decreased capacities, land area available for development, available interconnections and other factors which may increase or reduce supply or demand, therefore, DPH strongly advises the following margin of safety criteria to meet the above legal definition and to ensure adequate water service and protection of public health and safety:

1) Public water systems utilizing surface water sources with a safe yield of 5.0 million gallons per day (MGD) or greater should maintain a margin of safety of fifteen percent (15%) or greater based on the average daily demand (ADD) of the system.

Average day demands are reasonable to consider for this type of system due to the following:

- Larger surface water supplies can be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Treatment plant capacities are generally higher than approved safe yield capacities.
- Large amounts of storage are available in the reservoir itself which allow the system to operate safely
  over an extended time period to accomodate high demand periods.
- 2) Public water systems utilizing groundwater sources, surface water sources with a DPH approved safe yield of less than 5.0 MGD, or any combination thereof should maintain a margin of safety of fifteen percent (15%) or greater based on the maximum month average daily demand (MMADD) of the system.

Maximum month average day demands are reasonable to consider for groundwater systems or small surface water supplies due to the following:

- Maximum month average day demand conditions can extend for up to a few months during high demand periods which would leave these systems more susceptible to water supply emergency conditions.
- These sources can not be utilized at capacities beyond their approved safe yield for extended time periods without incurring long term deliterous effects to the supply.
- Large amounts of storage are not available in a groundwater source or small reservoir.
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Average Daily Demand - The total annual production from all sources of supply divided by the number of days in that calendar year

Maximum Month Average Daily Demand - The highest water demand in a month calculated by dividing the total production from all sources

Maximum Daily Demand - The annual maximum daily rate of water use measured in gallons per day.